

What is claimed is:

1. A printing method for printing, on a medium, an image in which a resolution in a first direction is higher than a resolution
5 in a second direction by forming first dots or second dots that are smaller than said first dots at positions on said medium that correspond to pixels structuring said image, said method comprising the step of

forming the second dot at a position on said medium
10 corresponding to a certain pixel if

the first dot is to be formed at the position on said medium corresponding to said certain pixel, and

at least either one of condition 1 or condition 2 below is met:

15 condition 1:

neither said first dot nor said second dot is to be formed at a position on said medium corresponding to one adjacent pixel of either
20 two adjacent pixels that are adjacent, in said first direction, to said certain pixel, and neither said first dot nor said second dot is to be formed at positions on said medium corresponding to two pixels that are adjacent, in said second direction, to said one adjacent
25 pixel; or

condition 2:

neither said first dot nor said second dot is to be formed at a position on said medium corresponding to the other adjacent pixel of
30 said two adjacent pixels, and neither said

first dot nor said second dot is to be formed at positions on said medium corresponding to two pixels that are adjacent, in said second direction, to said other adjacent pixel.

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2. A printing method according to claim 1, wherein said first dot is longer in said second direction than in said first direction.

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3. A printing method according to claim 2, wherein said first dot has an oval shape.

4. A printing method according to claim 1, wherein:
said first dots and said second dots are formed by a print
15 head;
said print head is movable in a predetermined direction;
and
said second direction is parallel to said predetermined
direction.

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5. A printing method according to claim 1, wherein:
said medium is carried in a carrying direction when said
medium is being printed; and
said second direction is parallel to said carrying
25 direction.

6. A printing method according to claim 1, further comprising the step of

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converting the resolution of an image having a predetermined resolution in said first direction and a predetermined resolution

in said second direction to obtain said image in which the resolution in said first direction is higher than the resolution in said second direction.

5 7. A printing method according to claim 6, wherein
said predetermined resolution in said first direction and
said predetermined resolution in said second direction are the
same.

10 8. A printing method according to claim 6, wherein
adjacent pixels among pixels that structure said image
having the predetermined resolution are taken as a unit and
regarded as a new pixel to obtain said image in which the resolution
in said first direction is higher than the resolution in said
15 second direction.

9. A printing method according to claim 8, wherein
two adjacent pixels among the pixels that structure said
image having the predetermined resolution are taken as a unit and
20 regarded as a new pixel.

10. A printing method according to claim 8, wherein
adjacent pixels in said second direction among the pixels
that structure said image having the predetermined resolution are
25 taken as a unit and regarded as a new pixel.

11. A printing method according to claim 6, wherein
an amount of information of pixel data of each of said pixels
that structure said image in which the resolution in said first
30 direction is higher than the resolution in said second direction

is larger than an amount of information of pixel data of each of said pixels that structure said image having the predetermined resolution.

- 5 12. A printing method according to claim 11, wherein
said amount of information of said pixel data of each of
said pixels that structure said image in which the resolution in
said first direction is higher than the resolution in said second
direction is at least two bits.

- 10 13. A printing method according to claim 11, wherein
said amount of information of said pixel data of each of
said pixels that structure said image having the predetermined
resolution is one bit.

- 15 14. A printing method according to claim 1, wherein
the image printed on said medium is an image in which a
predetermined region is filled in with said first dots or said
second dots.

- 20 15. A printing method according to claim 14, wherein
said position on said medium corresponding to said certain
pixel is at an outline section of said predetermined region.

- 25 16. A printing method according to claim 1, wherein
the image printed on said medium is text.

17. A printing method for printing, on a medium, an image in
which a resolution in a first direction is higher than a resolution
30 in a second direction by forming first dots or second dots that

are smaller than said first dots at positions on said medium that correspond to pixels structuring said image, said method comprising the step of

forming the second dot at a position on said medium
5 corresponding to a certain pixel if

the first dot is to be formed at the position on said medium corresponding to said certain pixel, and

at least either one of condition 1 or condition 2 below is met:

10 condition 1:

neither said first dot nor said second dot is to be formed at a position on said medium corresponding to one adjacent pixel of either two adjacent pixels that are adjacent, in said
15 first direction, to said certain pixel, and neither said first dot nor said second dot is to be formed at positions on said medium corresponding to two pixels that are adjacent, in said second direction, to said one adjacent
20 pixel; or

condition 2:

neither said first dot nor said second dot is to be formed at a position on said medium corresponding to the other adjacent pixel of
25 said two adjacent pixels, and neither said first dot nor said second dot is to be formed at positions on said medium corresponding to two pixels that are adjacent, in said second direction, to said other adjacent pixel,

30 wherein:

said first dot has an oval shape that is longer in said second direction than in said first direction;

said first dots and said second dots are formed by a print head;

5 said print head is movable in a predetermined direction;
 said second direction is parallel to said predetermined direction;

 the resolution of an image having a predetermined resolution in said first direction and a predetermined resolution in said
10 second direction is converted to obtain said image in which the resolution in said first direction is higher than the resolution in said second direction;

 said predetermined resolution in said first direction and said predetermined resolution in said second direction are the
15 same;

 two pixels adjacent to each other in said second direction among the pixels that structure said image having the predetermined resolution are taken as a unit and regarded as a new pixel to obtain said image in which the resolution in said
20 first direction is higher than the resolution in said second direction;

 an amount of information of pixel data of each of said pixels that structure said image in which the resolution in said first direction is higher than the resolution in said second direction
25 is larger than an amount of information of pixel data of each of said pixels that structure said image having the predetermined resolution;

 said amount of information of said pixel data of each of said pixels that structure said image in which the resolution in
30 said first direction is higher than the resolution in said second

direction is at least two bits;

said amount of information of said pixel data of each of said pixels that structure said image having the predetermined resolution is one bit;

5 the image printed on said medium is an image in which a predetermined region is filled in with said first dots or said second dots;

said position on said medium corresponding to said certain pixel is at an outline section of said predetermined region; and

10 the image printed on said medium is text.

18. A control method for correlating either first dot information about a first dot or second dot information about a second dot that is smaller than said first dot to each of a plurality of pixels that structure an image in which a resolution in a first direction is higher than a resolution in a second direction, and for outputting said first dot information and said second dot information, said method comprising the step of

correlating said second dot information to a certain pixel
20 if

said first dot information is correlated to said certain pixel, and

at least either one of condition 1 or condition 2 below is met:

25 condition 1:

neither said first dot information nor said second dot information is correlated to one adjacent pixel of either two adjacent pixels that are adjacent, in said first direction, to said certain pixel, and neither said first dot
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information nor said second dot information is correlated to two pixels that are adjacent, in said second direction, to said one adjacent pixel; or

5 condition 2:

neither said first dot information nor said second dot information is correlated to the other adjacent pixel of said two adjacent pixels, and neither said first dot information nor said second dot information is correlated to two pixels that are adjacent, in said second direction, to said other adjacent pixel.

19. A printing apparatus comprising:

15 a head that is capable of forming, on a medium, first dots and second dots that are smaller than said first dots;

wherein said printing apparatus prints, on said medium, an image in which a resolution in a first direction is higher than a resolution in a second direction by forming said first dots or said second dots at positions on said medium that correspond to pixels structuring said image; and

20 wherein said printing apparatus forms the second dot at a position on said medium corresponding to a certain pixel if

the first dot is to be formed at the position on said

25 medium corresponding to said certain pixel, and

at least either one of condition 1 or condition 2 below is met:

condition 1:

neither said first dot nor said second dot is to be formed at a position on said medium

corresponding to one adjacent pixel of either two adjacent pixels that are adjacent, in said first direction, to said certain pixel, and neither said first dot nor said second dot is to be formed at positions on said medium corresponding to two pixels that are adjacent, in said second direction, to said one adjacent pixel; or

condition 2:

neither said first dot nor said second dot is to be formed at a position on said medium corresponding to the other adjacent pixel of said two adjacent pixels, and neither said first dot nor said second dot is to be formed at positions on said medium corresponding to two pixels that are adjacent, in said second direction, to said other adjacent pixel.

20. A control apparatus comprising

a controller for:

correlating either first dot information about a first dot or second dot information about a second dot that is smaller than said first dot to each of a plurality of pixels that structure an image in which a resolution in a first direction is higher than a resolution in a second direction;

outputting said first dot information and said second dot information; and

correlating said second dot information to a certain pixel

if

said first dot information is correlated to said

certain pixel, and

at least either one of condition 1 or condition 2 below
is met:

condition 1:

5 neither said first dot information nor said
second dot information is correlated to one
adjacent pixel of either two adjacent pixels
that are adjacent, in said first direction, to
said certain pixel, and neither said first dot
10 information nor said second dot information is
correlated to two pixels that are adjacent, in
said second direction, to said one adjacent
pixel; or

condition 2:

15 neither said first dot information nor said
second dot information is correlated to the
other adjacent pixel of said two adjacent
pixels, and neither said first dot information
nor said second dot information is correlated
20 to two pixels that are adjacent, in said second
direction, to said other adjacent pixel.

21. A computer-readable storage medium having recorded thereon
a computer program for causing a printing apparatus comprising
25 a head that is capable of forming, on a medium, first dots and
second dots that are smaller than said first dots to achieve
functions of:

printing, on said medium, an image in which a resolution
in a first direction is higher than a resolution in a second
30 direction by forming said first dots or said second dots at

positions on said medium that correspond to pixels structuring said image; and

forming the second dot at a position on said medium corresponding to a certain pixel if

5 the first dot is to be formed at the position on said medium corresponding to said certain pixel, and

at least either one of condition 1 or condition 2 below is met:

condition 1:

10 neither said first dot nor said second dot is to be formed at a position on said medium corresponding to one adjacent pixel of either two adjacent pixels that are adjacent, in said first direction, to said certain pixel, and
15 neither said first dot nor said second dot is to be formed at positions on said medium corresponding to two pixels that are adjacent, in said second direction, to said one adjacent pixel; or

20 condition 2:

neither said first dot nor said second dot is to be formed at a position on said medium corresponding to the other adjacent pixel of said two adjacent pixels, and neither said
25 first dot nor said second dot is to be formed at positions on said medium corresponding to two pixels that are adjacent, in said second direction, to said other adjacent pixel.

30 22. A computer-readable storage medium having recorded thereon

a computer program for causing a control apparatus comprising a controller to achieve functions of:

correlating either first dot information about a first dot or second dot information about a second dot that is smaller than
5 said first dot to each of a plurality of pixels that structure an image in which a resolution in a first direction is higher than a resolution in a second direction;

outputting said first dot information and said second dot information; and

10 correlating said second dot information to a certain pixel if

said first dot information is correlated to said certain pixel, and

15 at least either one of condition 1 or condition 2 below is met:

condition 1:

neither said first dot information nor said second dot information is correlated to one adjacent pixel of either two adjacent pixels
20 that are adjacent, in said first direction, to said certain pixel, and neither said first dot information nor said second dot information is correlated to two pixels that are adjacent, in said second direction, to said one adjacent
25 pixel; or

condition 2:

neither said first dot information nor said second dot information is correlated to the other adjacent pixel of said two adjacent pixels, and neither said first dot information
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nor said second dot information is correlated to two pixels that are adjacent, in said second direction, to said other adjacent pixel.